Development and Climate Change at the World Bank Group

Climate Investment Funds

Environment Department
Sustainable Development

May, 2009

Climate Investment Funds

- Multi-stakeholder design meetings 2008
  - **March 4 – 5 Paris**
  - **April 14-15 Wash D.C.**
  - **May 21-22 Potsdam**
- Approved by the Board on July 1
- September 26 pledging meeting

Pledges Received US$ equivalent millions	
Australia	127
Canada	82
France	300
Germany	813
Japan	1,200
Netherlands	50
Norway	50
Spain	118
Sweden	92
Switzerland	20
United Kingdom	1,488
United States	2,000
Total	**US$6.3 billion**

*exchange rates as of Sept 26th, 2008

Climate Investment Funds

Design Principles

- Demonstrate how financial and other incentives can be scaled-up to support adaptation and mitigation in a coherent and integrated manner
- Mobilize new and additional concessional financing for transformational actions
- Utilize skills and capabilities of MDBs to deliver financing at significant scale to unleash the potential of the public and private sectors to address climate change
- Complement other multilateral financial mechanisms, such as GEF and Adaptation Fund
- Include a "sunset clause" to avoid pre-judging a future agreement
- Pull together number of emerging initiatives to address climate change – providing coherence and avoiding proliferation of many small initiatives

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Climate Investment Funds

Clean Technology Fund

Finance scaled-up demonstration, deployment and transfer of low carbon technologies

Country Investment Plans

US$5 billion pledged (+/-)

Strategic Climate Fund

Targeted programs with dedicated funding to pilot new approaches with potential for scaling up

Pilot Program for Climate Resilience	Forest Investment Program	Scaling Up Renewable Energy in Low Income Countries
Mainstream climate resilience into core development planning	Reduce emissions from deforestation and forest degradation	Transformational change to use of renewable energy

US$1 billion pledged (+/-)

Climate Investment Funds

Governance

Partnership Forum

Broad meeting of stakeholders including: donor and eligible recipient countries, MDBs, UN and UN agencies, GEF, UNFCCC, the Adaptation Fund, bilateral development agencies, NGOs, private sector entities, scientific and technical experts

Clean Technology Fund

Trust Fund Committee

Australia, Brazil, China, Egypt, France, Germany, India, Japan, Mexico, Morocco, South Africa, Spain, Sweden, Turkey, UK, US

Co-Chairs: US & S. Africa

Active Observers
UNDP, GEF, UNEP, UNFCCC
4 civil society; 2 private sector

Strategic Climate Fund

Trust Fund Committee

Algeria, Australia, Bangladesh, Canada, Costa Rica, Germany, Indonesia, Japan, Kenya, Netherlands, Norway, Switzerland, Thailand, UK, Yemen

Co-Chairs: tbd

Active Observers
UNDP, GEF, UNEP, UNFCCC
4 civil society; 2 Indigenous Peoples; 2 private sector

Climate Investment Funds

Strategic Climate Fund (SCF)

Programs:

- Targeted programs with dedicated funding to provide financing to pilot new approaches with potential for scaling up
- Approval of program financing delegated to Trust Fund Sub-Committees
- First SCF program is the Pilot Program for Climate Resilience (PPCR)
- Programs under design: renewable energy in low income countries and sustainable forest management

Climate Investment Funds

SCF - Pilot Program for Climate Resilience

- Help most vulnerable countries explore practical ways to mainstream climate resilience into core development planning and budgeting, building on National Adaptation Programs of Action (NAPAs)
- Grants as the main instrument with an option to augment by IDA-like resources
- 11 pilots (9 countries, 2 regions) based on: transparent vulnerability criteria; preparedness and ability to move towards climate resilient development plans; distribution across regions and types of hazards
- Expert group established to provide advice on country selection
- Countries invited to date: Bangladesh, Bolivia, Cambodia, Mozambique, Nepal, Niger, Tajikistan, Zambia (MNA country tbd)
- 2 regional programs in Caribbean and South Pacific

Under Design

SCF - Forest Investment Program

- Finance investments in developing countries to reduce GHG emissions from deforestation and forest degradation
- May include implementation of policies and measures, and investments in institutional capacity, forest governance
- Take into account adaptation and multiple benefits

- Final design meeting May 5-6

Under Design

SCF - Scaling Up Renewable Energy

- Help low income countries make a transformational change to use of renewable energy
- Create greater public and private confidence in renewable energy
- Improve market and financial conditions and lead to large scale replication

- Working group meeting, Paris, March 24 – 25
- Consultation, Paris, April 29

Climate Investment Funds

Clean Technology Fund

- Supports Programs involving renewable energy and energy efficiency of energy supply and demand, and improved transport sector efficiency and modal shifts
- Accessing CTF
  - Country must be ODA eligible with active MDB country program
  - Investment plan embedded in national development plan
  - Investment Criteria
    - Potential for GHG Emissions Savings
    - Cost-effectiveness
    - Demonstration Potential at Scale
    - Development Impact
    - Implementation Potential
    - Additional Costs and Risk Premium
- Grants and highly concessional lending to be blended with MDB lending
- 15 – 20 investment plans

Climate Investment Funds

Clean Technology Fund – coal and gas screening

With respect to low carbon opportunities in coal and gas power investments, the CTF will apply the following criteria:

a. Net carbon emissions factor of new coal-fired power plants or new units in existing plants should be less than 0.795 t CO2/MWh, adjusted for site- and country-specific factors.

b. New coal-fired power plants should include CCS readiness considerations in design such as space, access, storage, transport and costs.

c. Net efficiency improvements in existing coal-fired power plants should be at least five percentage points from operating efficiency levels or with net carbon emissions reductions of at least 15%, and will be limited to plants expected to be operational for 15 years after the upgrade.

d. Fuel switching from coal to gas should result in a decrease in CO2 emissions of at least 50%. Net carbon emissions of new gas-fired power plants or new units in existing plants should be less than 0.398 t CO2/MWh (net), adjusted for country- and site-specific factors.

Source: Clean Technology Fund Investment Criteria for Public Sector Operations, February 9, 2009

Climate Investment Funds

Clean Technology Fund - leveraging

- First investment plans endorsed in January
  - Egypt
    - Wind, urban transport
    - Proposed CTF $300 million » » » $1.9 billion
  - Mexico
    - RE, efficient lighting and appliances, urban transport
    - Proposed CTF $500 million » » » $6.2 billion
  - Turkey
    - RE, EE
    - Proposed CTF $250 million » » » 2.1 billion
- All include private sector components through IFC and MDB private sector arms

Climate Investment Funds

sharing lessons starts now

- Already generating crucial new knowledge and lessons learned
  - ☑ balanced governance mechanisms
  - ☑ financing partnerships
  - ☑ unprecedented civil society participation
  - ☑ private sector engagement
- Knowledge sharing will occur at “beyond-business-as-usual” levels
  - ☑ Partnership Forum
  - ☑ Knowledge sharing receives dedicated financing and “programmed in”
- MDB cooperation and coordinated assistance to countries

Outline

- Development and Climate Change
- World Bank Group Strategic Framework
- Climate Investment Funds
- Carbon Finance

An urgent challenge for development:

Countries most affected by 6 climate threats

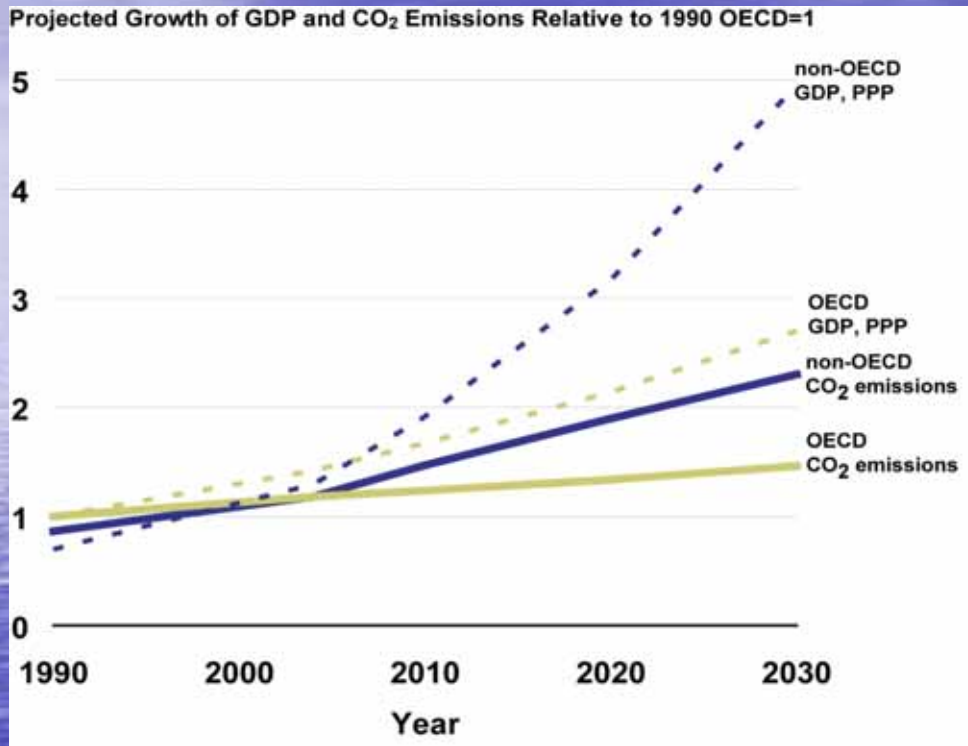
Drought	Flood	Storm	Coastal 1m	Coastal 5m	Agriculture
Malawi	Bangladesh	Philippines	All low-lying Island States	All low-lying Island States	Sudan
Ethiopia	China	Bangladesh	Vietnam	Netherlands	Senegal
Zimbabwe	India	Madagascar	Egypt	Japan	Zimbabwe
India	Cambodia	Vietnam	Tunisia	Bangladesh	Mali
Mozambique	Mozambique	Moldova	Indonesia	Philippines	Zambia
Niger	Laos	Mongolia	Mauritania	Egypt	Morocco
Mauritania	Pakistan	Haiti	China	Brazil	Niger
Eritrea	Sri Lanka	Samoa	Mexico	Venezuela	India
Sudan	Thailand	Tonga	Myanmar	Senegal	Malawi
Chad	Vietnam	China	Bangladesh	Fiji	Algeria
Kenya	Benin	Honduras	Senegal	Vietnam	Ethiopia
Iran	Rwanda	Fiji	Libya	Denmark	Pakistan

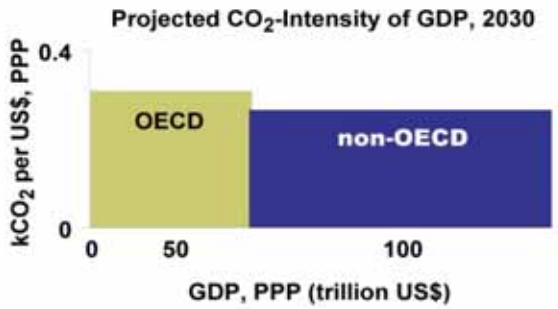
Low Income

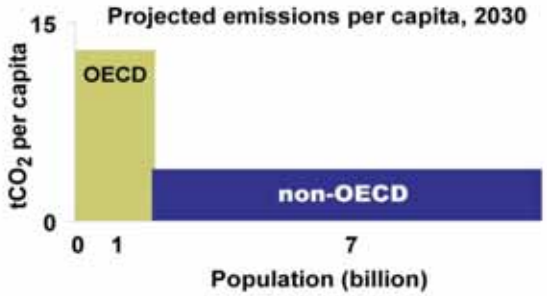
Middle Income

Source: World Bank

Emission growth in non-OECD countries is driven by development imperatives







Source: Energy Information Administration, US Department of Energy, 2007.

Under future projections consistent across several sources, non-OECD emissions are expected to grow more slowly than in OECD countries compared to the respective economic growth rates but faster in absolute terms. Bringing global emissions to the levels recommended by the *Intergovernmental Panel on Climate Change* cannot be achieved by reducing emissions from developed countries alone. Yet, GDP and energy use per capita, two MDG indicators, as well as emissions per capita, will remain lower in most of the developing than in industrial countries over the next decade. These indicators will vary significantly across developing countries and between low- and middle-income groups. A cooperative action is needed to help slow the growth of emissions in developing countries while preserving their economic and human development progress.

The Development Challenge of Climate Change

To ensure robust economic growth and development progress in developing countries despite:

- Added costs and risks from climate change
  - Additional hundreds billions of dollars per year to tackle the problem: adaptation, mitigation actions, structual adjustment to global policy responses
  - Unabated, threatens to reverse development gains
- Asymmetric impacts
  - Highest for poorer countries that contribute least to the problem
- Continued disparities in GDP and energy use per capita among developed and developing countries for decades
- ...and the lack of decision making framework
  - to address multiple uncertainties, and spatial and temporal trade-offs over the very long term

There are large financial needs

- Additional costs to catalyze investments with **mitigation** co-benefits in developing countries at **US$180 – 220 bln p.a. in 2010 – 2020,** and up to **~ US$400 bln p.a. in the next decade**

- Preliminary estimates for additional costs of **adaptation**: from **US$ 25-50 bln p.a in 2010-2020 to US$30-70 bln p.a. by 2030** for developing countries alone

- **Research and Development** for energy production and use would add about **US$10 to 100 billion bln p.a.**

…and a HUGE GAP between available and emerging resources

Current dedicated resources

Mitigation (bln US$ p.a)		
GEF	0.25	p.a
C-Market	8+	p.a.
CIF/CTF		1+
Other	1+ ?	p.a
TOTAL	**~10**	**p.a.**
NEED	***>180 p.a.***	**(min. estimate)**

Adaptation (bln US$ p.a.)	
LDCF&SCCF	0.1
Adaptation fund	0.3-0.8
CIF/PPCR	0.1
Other	0.1 ?
TOTAL	**~1 p.a.**
NEED	***>25 p.a.***
	(min. estimate)

- Cover less than 5% of developing countries' additional needs over 2010-20

Climate Change is not new for the World Bank

- **1991** Began implementing / leveraging GEF funding for climate change
- **1999** Pioneered Carbon Finance through $180 million Prototype Carbon Fund
- **1999** ”Fuel for Thought” Environment Strategy for the Energy Sector
- **2001** Adopted Environment Strategy with climate change pillar
- **2006-08** Clean Energy Investment Framework (CEIF):
  - (i) increased access to energy, especially in Sub-Saharan Africa; (ii) transition to a lower carbon energy development; and (iii) adaptation to climate variability and change.
- **2007** IDA and Climate Change Paper
- **2008** **Strategic Framework** (consultation and preparation), **Climate Investment Funds** (design process)
- **2009** Regional & Sectoral Strategies and Business Plans

Development and Climate Change:

A Strategic Framework for the World Bank Group

- A consensus document of 185 member countries
  - ✓ Endorsement by the Development Committee on October 12, 2008, with positive statements by all ministers
  - ✓ Support by G24 (developing countries forum)
- Involved wide-ranging consultations
  - ✓ ~2000 participants in 76 countries plus via Web
  - ✓ Exchange of views and outreacth will continue during the implementation
- Broad-based agreement on the need for WBG to play a larger role in climate action
  - ✓ Through a development lens and giving top priority to adaptation
- ✓ Builds on the MDB's Clean Energy Investment Framework and further defines WBG role and priorities

What We Have Learned - I

- Massive financing gap
- Development comes first
- Leadership required by developed countries
- UNFCCC primacy
- Mixed views on funding mechanisms
- Sensitivities on World Bank role, GEF, Adaptation Fund
- Fossil fuels debate

What We Have Learned - II

- Need better capacity building and knowledge sharing
- Partnerships crucial (client countries, MDBs, UNDP, UNEP, GEF, donors, NGOs)
- Equity issues including vulnerable groups, such as indigenous peoples
- Private sector needs
  - post-2012 certainty for investment decisions
  - risk mitigation to accelerate new technology investment
  - speed and certainty in the dissemination of new donor funds

Objectives and guiding principles

Objectives

- Enable the WBG to effectively support sustainable development and poverty reduction at the national, regional and local levels, as climate risks and climate-related economic opportunities arise
- Facilitate global action and interactions by all countries

Leadership of developed countries in domestic action and transfer of resources is critical

Principles

- Primacy of the UNFCCC process
- Country-led, demand driven approach
  - Adaptation is priority for many developing countries
- Resource mobilization in addition to the current ODA levels
- Working through partnerships and consultations
- A framework to support operational priorities and strategies across sectors and themes

Six Areas for Action

1. Support climate actions in country-led development processes
2. Mobilize additional concessional and innovative finance
3. Facilitate the development of market-based financing mechanisms
4. Leverage private sector resources
5. Support accelerated development and deployment of new technologies
6. Step up policy research, knowledge and capacity building

www.worldbank.org/climatechange

Examples of Actions and Indicators: 2009 ~ 2011

Interim Progress Report – in Spring 2010

- Screening is applied for:
  - climate risk in hydropower and other water investments with long life spans
  - energy efficiency opportunities, starting with energy projects
- Forest Carbon Partnership Facility and Carbon Partnership Facility operational
- Climate Investment Funds capitalized and operational
- Guarantees and climate risk insurance products in greater use
- Increased support to sustainable forest management, agriculture and food production, and sustainable energy, transport and urban development investments,
- Global level knowledge products on climate action (WDR2010, Global Economics of Adaptaion study, etc.)

Action in Energy Sector

- **FY08 energy lending/financing at $7.5 billion**
- **Financing for Renewable and Energy Efficiency increases <u>much faster</u>, including as percentage of total volume**
- **By FY11, commitment to bring share of low carbon projects to 50% of total (from 38% in FY08), and increase EE/new RE financing by ave. 30 % per year**
- **Significant expansion of hydropower program**
- **Of total energy lending last year, about 39%** - more than $2.9 billion - **was for low-carbon** projects or programs.
  - Low-carbon means renewable energy, energy efficiency, hydro, and other activities, e.g.: programs to rehabilitate inefficient generating plants.
- **34% was to support energy transmission and distribution systems and services, as well as policy work** –over $2.5 billion
- **About 27% was to support fossil fuel production or use in generation** (and more than half of that was for natural gas) - around $2 billion

✓ **WBG (includes IBRD, IDA, IFC) involvement in the fossil fuel sector has led to improved environmental and social outcomes** through safeguards, transparent processes, and improved technology

Climate Investment Funds

www.worldbank.org/cif

Carbon Finance

www.carbonfinance.org

Carbon Finance

- Currently US$2 billion +
- 10 Funds and Facilities
- 16 governments and 66 private companies have contributed
- December 2007
  - Forest Carbon Partnership Facility
  - Carbon Partnership Facility

Forest Carbon Partnership Facility

- Assist developing countries in reducing emissions from deforestation and forest degradation (REDD)
  - **Readiness Fund**: Capacity building for at least **20 countries**
  - **Carbon Fund**: Payments for verified emission reductions in **5 of those countries**
- Governance: parity between financial contributors and developing countries
- $174 million pledged so far from a dozen contributors
- 42 countries have asked to participate; 14 already selected

➢ www.forestcarbonpartnership.org

Carbon Partnership Facility

- Develop emission reductions and support their purchase over long periods after 2012
- Assist developing countries and economies in transition in reducing greenhouse gas emissions in energy and infrastructure sectors:
  - **Carbon Asset Development Fund (CADF):** Program preparation funds
  - **Carbon Fund:** Payments for emission reductions (ERs)
- Aims to move from one-off ER projects to scale through strategic, long term programmatic approaches that have a significant impact on emissions and development

➢ Visit www.carbonfinance.org

Corporate Social Responsibility Program on Climate Change: *Walking the Walk*

The WBG is managing its Corporate Footprint

- Accounting for our Greenhouse Gas Emissions; total emissions in HQ offices in FY2008 were 135,200 metric tons of C02 equivalent, zero net increase over FY2007
- WBG offsets electricity emissions by investing in Renewable Energy Certificates and Voluntary Emissions Reduction Certificates from renewable energy and afforestation projects in developing countries
- WB corporate emissions reduction goal 7% below 2006 levels by 2011

- Reducing our footprint: two buildings are "Energy Star" rated and WB working towards LEED Certification in several other buildings
- Only GreenSeal certified cleaning products used in US offices, aggressive recycling, donations, composting and "green" procurement requirements

Advising Partner Agencies

- WBG working with UN agencies to help them achieve their target of climate neutral UN by sharing our tools and methodologies
- WBG collaborating with MDBs on greening and GHG emissions initiatives

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